DOCUMENT RESUME

ED 387 103 IR 017 320

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TITLE Connecting Classrooms to the Web: An Introduction to HTML.
PUB DATE 95
NOTE 6p.; In: Association of Small Computer Users in Education (ASCUE) Summer Conference. Proceedings (28th, North Myrtle Beach, South Carolina, June 18-22, 1995); see IR 017 305.
PUB TYPE Guides - Non-Classroom Use (055) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Computer Networks; Computer Uses in Education; Educational Media; Electronic Text; Hypermedia; Information Networks; *Multimedia Materials
IDENTIFIERS *HTML; Internet; *World Wide Web

ABSTRACT

The World Wide Web (WWW) acts as a multimedia Internet, navigable via Web browsers. Web browsers (Mosaic, Netscape, Cello, WinWeb, etc.) read files treated in HyperText Mark-up Language (HTML) and display interactive pages to users. Teachers with computer-mediated classrooms or labs can use HTML and Web browsers to create multimedia presentations for their classes. Files required for HTML, including text, graphics, and other multimedia, are discussed. The process involves using text files to create HTML documents containing coding-embedded HTML commands. HTML commands are the language used to mark up text to make it interactive and "pretty." The most common HTML codes ("tags") for making text pretty are listed and defined. Additional codes are defined which are needed to turn the text into an interactive, multimedia experience. Appendices include sample text from a Web document and some Internet sites of interest to Web builders. (MAS)

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Connecting Classrooms to the Web: An Introduction to HTML

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You and your students can now "point & click" your ways around the world.

The WorldWideWeb (www, or simply "the Web") acts as a multi-media Internet, navigable via Web browsers in much the same way that the Internet Proper can be navigated via "gopher" clients and servers . Web browsers (including Mosaic, NetScape, Cello, WinWeb and other locally hosted clients) "read" files treated in html (HyperText Mark-up Language) and display interactive "pages" to their users. You click here, it displays a new page; click here, a picture appears; click over here, you're watching a movie clip; click on this other spot on the page, you're hearing music. Click, click, click, click. Bunch of fun. And it *can be* educational. It doesn't matter to the Web browser whether the files it displays are saved to a local hard drive or stored on a remote machine to be accessed via a Web server–across the street or around the globe. Click!

Teachers with computer-mediated classrooms (or labs) can use html and Web browsers to create multi-media presentations for their classes. All they need is the browser, at least 8 meg of ram and some space on a network-accessible hard drive. Click! Teachers fortunate enough to have computer-aided classrooms (or labs) with Internet access can take it a step further and create customized gateways that will lead their students directly to the Internet resources most relevant to the subject(s) at hand. Click! And teacher and student scholars who have system administrators who are willing to support a local Web server and to provide disk space on a machine accessible to the Internet can take Web use still another step. They can add to and embellish those resources, publishing pages of their own for use by other teachers and students around the world. Click!

It is a relatively painless procedure.

Mostly, it requires of you the creation of text (as in "text-only" or ascii) files. All the other files with which you'll be working–the .gif files for your grahics, the .jpg files you'll use for high-resolution pictures, the .wav files you'll need for any sounds you want to use, the .mpg files you'll use for moving pictures–all those files will be either "found art" that you'll collect or files that you'll create yourself (or with the help of computer-clueful friend or associate) using machines and software that will ask little of you other than that you name the file. Indeed, the primary challenge presented to you by these "multi-media" files will be keeping track of their names, if your experience is anything like mine.

But, getting back to those pesky text files, that's what you'll use to create your html documents. They'll contain coding–embedded html commands. That's the "language" you'll be using to "mark up" your "test" and make it "hyper" (that is, interactive) and, well, pretty (which is to say, italicized where you want it to be italicized, in larger type where you want larger type, illustrate it with graphics, etc.) This

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coding may look strange to you, at first, until you get used to its (really pretty straightforward) inner logic. But your computer and all the software on your computer and everyone else's computer–*other than whatever Web browsing software looks at it*–will see (and treat) these files as "text-only" or text files. You should treat them as text (*not* binary) data, too, whenever up- or downloading these files, when using ftp etc. The convention, on the Web and amongst the computer-clueful in general, is to give these files ".htm" extensions on pc (or dos) platforms (and ".html" in unix or vms environments).

There are several html authoring programs available that you can use to embed this coding in your documents. Each offers certain conveniences. But you don't really need one of those to get started. All you *really* need to produce html documents is a text editor. You can use Windows' "Notebook" or any dos text editor. You can even use "Word" or "WordPerfect"–provided you remember to save the file as "test-only" or ascii.

The most common html codes (or "tags") for making your text pretty include the following:

Begin End What It Does

<html> </html> These are not really necessary to make your html document "work right," but it's considered "good form" to use them to indicate the beginnings and ends of such documents.

<title> </title> Whatever text appears between these tags will operate as your title. That is, it will appear in the "title bar" of the "window" the reader's Web browser occupies on the screen.

<h1> </h1> Whatever text appears between these tags will appear as a Size 1 heading, however the reader's Web browser treats that. Type specifications, by category, are resident in the readers' Web browsers. You control the category, with tags like these. But they control how those categories are treated typographically. Most browsers recognize smaller headings, designated h2, h3, h4, h5, h6.

 Ends (or "breaks") a paragraph. It also inserts a blank line and begins the next paragraph. There is a tag which begins paragraphs, but it is not necessary or commonly used.

 Forces a line break. It operates, in other words, sort of like a "hard" carriage return. Web browsers generally "word wrap" lines of text according to whatever size window their users are operating, unless they encounter or <br> or some other excuse to "end" whatever line they are reading.

<u> </u> Underlines the text between the tags so that <u>this</u> appears like this when read by a Web browser.

  Bold faces the text between the tags so that this appears like **this** when read by a Web browser.

  Italicizes the text between the tags so that this appears like *this* when read by a Web browser.

Do not permit your tags to overlap. Encapsulate your coding instead. That is, if you want part of a **message to be in bold and *part of it to be italic too***, that needs to be encoded: message to be in bold and part of it to be italic too and ***not*** message to be in bold and part of it to be italic too.

To make all this an interactive, mutli-media experience for your readers you'll need to use a couple of additional tags to "link" your document to other documents on the Web and to decorate your document

with graphics (called "in-line images" by the computer clueful). That's what will put the "hyper" in your hypertext. The most common html codes (or "tags") for "hyper"-activating your document include:

Begin End What It Does

  Whatever text occurs between these tags will be highlighted (usually in blue) by your readers' Web browsers. "Clicking" on that text will connect the user to whatever "url" you specify between the quotation marks (where I've inserted a question mark).

<img align=x src="filename" alt="text"> Inserts an in-line image in your Web document, when the following substitutions are made. Where I've put an "x," you insert the word **top**, **middle**, or **bottom**, depending upon where you want the next piece of text in your document to "align" itself *viz a viz* the graphic. The name of the graphic file replaces "filename." And you may offer an alternative "text" substitute for the graphic for users operating non-graphic browsers (like Lynx).

To get a little fancy, you can combine these two commands (putting **<img align=x src="filename" alt="text">** between **** and ****, where the text would ordinarily go) to create graphics that operate as "buttons" that link your document to other resources on the Web. But gettting fancy is, by no means, required in your first venture into Web construction. You can save that for your second or third venture, after you've done a little experimenting, tested the results, and visited the on-line Web tutorials you'll find listed in Appendix B of this paper.

In the meantime, there is a good deal to be said for keeping things simple in this new interactive medium; and very little of that has been said, thus far. The best of what has been said so far, along these lines, I'd like to cite. I heard it at a conference this Spring in Columbia, Missouri. The subject was Web aesthetics and the speaker was Scott Fritz, manager of User Services for the Missouri Research and Education Network. He suggested the folloiwng:

Limit the wordiness of your documents. Several small documents are probably better than one large one.

Limit the size of graphics and offer alternative views for those without grahical interfaces. Thumbnail graphics [2,000 to 3,000 bytes] provide a small view so that people might explore graphics of interest and not enlarge those they do not wish to see.

Too much written material or too much grahpical information can both be difficult to look at, and be difficult for those who print the material out.

When linking to a purely grahical piece of information indicate the approximate size of the graphic.

Always try to give the viewer an indication of where they are.

Always try to provide some simple navigtional buttons (not all browsers incorporate the common ones, so you may want to have a "backout" button, or a link to the central home page of your server).

Try to make the text which indicates your links be informative of the links (do not use "click here" as

the link text). This could help [bibliographic] indexing processes. (Fritz)

Appendices include sample text from a Web document of my own construction and some http and ftp sites of interest to Web builders.

Appendix A: Sample Web Document

<html>

<title> Jumpin's Jive Pad </title>

<h1> Jumpin' Johnny's Jive Pad </h1><p>

<img align=bottom src="jumpbutt.gif">This Jive Pad belongs to Jumpin' Johnny LaRoe, pictured here. "Ta da!"<p>

<H4>It has Whole New Worlds to explore ... </H4>

You could visit a Virtual Gallery of contemporary art in Japan, f'instance, or travel to Spain to view (or even download) a collection of works by Salvador Dali. And there's always Le Louvre, of course -- dans le pays du Coneheads.<p>

You also may wish to explore the campus of <A HREF="du_moo_1.html">Diversity University MOO</A>, where Jumpin and his friends do some of their best eduMOOcational work; or wander the streets of Downtown Anywhere or the outskirts of The Sprawl -- Jumpin's favorite page away from home. But please understand ...<p>

<H4><I>you're also welcome to stick around.</I></H4></dl>

There are things to see here, too, ... in Jumpin's <A HREF="gallery.html">personal art collection</A> ... and things to read, as well, in his <A HREF="library.html">private library</A>.

</html>

Appendix B: HTTP & FTP Sites

A Beginner's Guide to html (from ncsa)

http://www.ncsa.uiuc.edu/demoweb/html-primer.html

Clarkson University's html Tutorial

http:// fire.clarkson.edu/html/htut.html

Indiana University's Primer to Web Writing

http://www-slis.lib.indiana.edu/internet/programmer-page.html

ncsa Guide to Documents for Writing Good html

http://union.ncsa.uiuc.edu:80/HyperNews/get/www/html.guides.html

The Bad Style Page (examples of things worth avoiding)

http://www.earth.com/bad-style

A Good Collection of Web Materials (including html editors)

ftp://ftp.more.net/pub/nic/windows
or
ftp://ftp.more.net/pub/nic/mac
or
ftp://ftp.more.net/pub/nic/unix
or
ftp://ftp.more.net/pub/nic/os2
or
ftp://ftp.more.net/pub/nic/lan
or
ftp://ftp.more.net/pub/nic/dos

Other Handy Web Stuff via MOREnet

http://www.more.net/common/resources/web_resources/internet.htm

Work Cited

Fritz, Scott. "Weaving the Web: Design Issues for Web Builders." Presentation. MOREnet Spring Conference. Columbia, Mo.: Missouri Research and Education Network, 1995.